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One worker killed, six others injured on May 11th at two Oregon workplaces



Posted by The Pump Handle on May 16, 2011

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by Elizabeth Grossman

Two industrial accidents – one fatal – that occurred on May 11 within 40 miles of each other are a reminder what a fine line there can be between workplace safety and acute danger.

One incident occurred at the Stimson sawmill and hardwood facility in Gaston, Oregon, (about 35 miles west of Portland) where workers were removing the cap from a hydraulic accumulator – a routine operation on a piece of equipment used to power mill machinery – in preparation for moving it from one location to another. Described as a metal cylinder about 5 feet long and 10 inches in diameter, the accumulator is supposed to be depressurized before maintenance. This one apparently was not. As the cap was being removed, the air and nitrogen inside, under 800 psi of pressure, turned the cap into a deadly projectile that killed 60 year-old Steve Allen, a mechanic and 30-year veteran of the plant, and injured two co-workers.

"Something like this has never happened before at the mill," said Debra Murchow, Stimson vice-president of human resources. "The Stimson lumber mill has an outstanding safety record," said Ken Bilderback, spokesperson for the Gaston Rural Fire District, which was called to the mill about 12:40 p.m. "We're rarely called for any sort of accident, certainly not of this magnitude, and no one can remember another fatal accident at the mill."

A search of OSHA records for the past ten years shows only one accident at the mill, in 2001 when a worker cut his thumb on a saw and required hospitalization. Oregon OSHA has already begun its investigation of the May 11 accident, said Murchow when we spoke the next day.

✦ Power failure leads to release of toxic gases

Later on the afternoon of the 11th, shortly after 5 p.m., four people, including two firefighters, were injured when an electrical power failure occurred at the Precision Castparts' PCC Structurals plant in southeast Portland, Oregon. Resulting equipment failures caused a release of toxic gases that prompted the fire department to issue a warning for residents within a half-mile of the plant to stay indoors and keep windows closed – but not all residents were actually called.

As Clackamas County Fire Department public information officer Steve McAdoo explained it to me, due to the initial power failure – and according to the Oregon Department of Environmental Quality (DEQ), the subsequent failure of a

backup generator to supply adequate power – a crane being used to dip a 700-pound piece of titanium into a tank of hydrofluoric nitric acid mixture failed to lift, causing an extended chemical reaction. The power loss also caused ventilation systems and air scrubbers to fail.

“By the time we got there the building was filled with a light orange gas,” said McAdoo. “Everyone was out of the building and accounted for but two firefighters and two employees were taken to area hospitals and treated for minor lung irritation,” he told me, describing how when the fire department and hazmat teams arrived, they saw “orange smoke puffing out of the windows.” By 9 p.m. the gas had dissipated and by 5 a.m. the next morning the air was declared clear of the hazard. But as a precaution, a nearby elementary school was closed for the day, and the following afternoon the road into the plant was roped with caution-tape and blocked by a police car with flashing lights.

Located in a mixed-use but largely residential neighborhood, the plant – listed by OSHA as non-union – employs about 550 people and, according to the company website, makes special metal parts for aerospace, energy and commercial applications. According to Precision Castparts 2010 annual report, between 2008 and 2010, more than 50% of the company’s sales went to aerospace, the rest to power and general industrial markets. Company sales between 2008 and 2010 ranged from \$5.5 billion to \$6.8 billion. General Electric is the company’s major customer; Boeing, United Technologies and Rolls-Royce are considered other key customers. In 2010 the company had 18,000 employees, 22 percent of whom are with unions or covered by collective bargaining agreements. Precision Castparts is one of Oregon’s two Fortune 500 companies and was announcing its quarterly earnings when I called to inquire about the accident (calls that were not returned).

A history of safety violations

This is far from the only accident that’s occurred at PCC Structural’s Oregon plants. According to data available from OSHA, the company has had ten reported investigated accidents – including one fatality – and 169 safety violations in the state since 2001. Six of these listed accidents occurred at the plant where the May 11 incident occurred, with two in July 2010, when the inspections that followed found 43 safety violations. The OSHA database does not include details of all such accidents, but several required hospitalization. In 2007 an employee at this plant was hospitalized and treated for second-degree chemical burns. In 2001 a worker at this plant died after falling into a tank of a hot (236°F) caustic solution. Two employees working with him were hospitalized for chemical and thermal burns. The total penalty to the company for the three violations listed for this incident: \$6,500.

During the same ten years, OSHA also lists 11 investigated complaints at PCC Structural’s plants in Oregon. Among the violations and complaints detailed: respiratory protection involving chromium, cobalt, nickel, and crystalline silica; ventilation; materials handling; and fall protection. When asked about the low penalty rates, Oregon OSHA spokesperson Melanie Mesaros explained that Oregon has some of the lowest such rates in the country.

“There are lots of dangerous chemicals in the plant of which we are aware,” Clackamas County Fire Department’s McAdoo told me. “We’ve been called to the plant many times,” he said, but “mostly for splashes and minor injuries.”

Substances used and released

The Oregon Fire Marshal’s emergency planning hazardous substance information database shows that the chemicals on site at PCC Structural’s include anhydrous ammonia; hydrofluoric, nitric and sulfuric acid; calcium and sodium

hydroxide; paraffin; numerous petroleum products; and substances that include titanium, silica, and a rare earth metal. Most of these are stored in drums and above-ground tanks. Substances listed on the required by the Environmental Protection Agency for certain materials used above a certain volume at facilities with 10 or more employees) for 2009 include chromium, cobalt, copper, hydrogen fluoride, nickel, and nitric acid. The plant's titanium casting process also uses slightly radioactive thorium. The hazardous substances the Oregon DEQ lists for the plant include trichloroethylene (TCE), tetrachlorethylene (TCA), perchloroethylene (PCE), and Freon-113. According to DEQ records the company has been cited for hazardous materials storage violations.

In addition to harming plant workers, some of these hazardous materials have also harmed the surrounding environment. Precision Castparts has been at this site since 1957. Over the years – as detailed by Oregon DEQ reports – solvents, including PCE and TCE have been released to Johnson Creek, a Willamette River tributary that runs by the factory, where DEQ has recorded levels of TCE and PCE at levels “above DEQ’s risk-based concentrations for leaching to groundwater for protection of residential drinking water sources.” PCE and TCE are considered carcinogenic. TCE exposure has also been associated with birth defects. Groundwater is used extensively for drinking water in the area and there are several municipal drinking water wells within less than one mile of the site. Precision Castparts is working with DEQ on an ongoing cleanup of Johnson Creek. (The company is also a “potentially responsible party” at seven different Superfund sites, none in Oregon, and the 2010 annual report notes that other sites may be added to this list.) Precision Castparts’ 2010 annual report also notes that “As of March 28, 2010, there were approximately 87 lawsuits pending against the Company alleging personal injury as the result of exposure to particulates, including asbestos, integrated into our premises or processes or into certain historical products.”

“DEQ will be assessing whether there’s been a violation of the company’s permits in this incident,” said spokesperson Marcia Danab on May 12th.

The May 11 incidents at the Stimson mill and Precision Castparts plant are very different. But both serve as a reminder of what can happen during an ordinary day at work when hazards are present.

These incidents occurred not long after I had spoken to Mike Wright, United Steelworkers’ Director of Health, Safety and Environment, about the just-released BlueGreen Alliance report explaining how safer chemicals and safer manufacturing processes can support chemical industry job growth. One of Wright’s comments seemed particularly applicable to what happened at these two workplaces: “We think we can handle even the most dangerous materials safely, but it’s hard to do. It takes time and effort and it’s expensive, and they still have intrinsic hazard.”

Wright talked about how shifting to safer chemicals and processes could eliminate the kind of hazards that created disastrous chemical releases like those at Bhopal and the Bayer CropScience plant in West Virginia, prompting me to wonder how PCC Structurals record might differ if it used less-hazardous materials. As Wright summarized, “Safety is best around less hazardous operations and materials.”

Elizabeth Grossman is the author of Chasing Molecules: Poisonous Products, Human Health, and the Promise of Green Chemistry, High Tech Trash: Digital Devices, Hidden Toxics, and Human Health, and other books. Her work has appeared in a variety of publications including Scientific American, Salon, The Washington Post, The Nation, Mother Jones, Grist, and the Huffington Post. Chasing Molecules was chosen by Booklist as one of the Top 10